



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,533	02/11/2004	Mike Suk	HIT1P059/HSJ920030244US1	2007
50535	7590	04/18/2006	EXAMINER	
ZILKA-KOTAB, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120			BLOUIN, MARK S	
			ART UNIT	PAPER NUMBER
			2627	
DATE MAILED: 04/18/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/777,533	Applicant(s) SUK, MIKE	
	Examiner Mark Blouin	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/11/04. | 6) <input type="checkbox"/> Other: ____. |

Detailed Action

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-11,13,15-27,29,31, and 32 rejected under 35 U.S.C. 102(e) as being anticipated by Kasajima et al (USPN 6,751,062).

3. Regarding Claims 1,15, and 31, Kasajima et al shows (Figs. 1-6) a magnetic storage system, comprising: a magnetic disk (10); at least one head (17) for reading from and writing to the magnetic disk; a slider (22) for supporting the head, an actuator arm (24) and suspension for supporting the slider; a vibration absorber (21) for reducing mechanical vibrations of the slider caused by contact of the slider with the magnetic media; wherein the vibration absorber includes a coupling portion (26) operatively coupled to the slider, and a weight (21) coupled to the coupling portion by a resiliently deformable flexure member (23); and a control unit (12) coupled to the head for controlling operation of the head.

4. Regarding Claims 2 and 16-19, Kasajima et al shows (Figs. 1-6) a slider assembly, wherein the vibration absorber includes a coupling portion (26) coupled to the slider, suspension, and actuator arm, and a weight coupled to the coupling portion by a resiliently deformable flexure member (23).

Art Unit: 2627

5. Regarding Claims 3,4,20,21, and 32, Kasajima et al shows (Figs. 1-6) a slider assembly, wherein the weight (21) is positioned towards a trailing edge and a leading edge of the slider (22).

6. Regarding Claims 5 and 22, Kasajima et al shows (Figs. 1-6) a slider assembly, further comprising a second weight (21b) coupled to the coupling portion.

7. Regarding Claims 6 and 23, Kasajima et al shows (Figs. 1-6) a slider assembly, wherein the weight (21a) and second weight (21b) are positioned towards a leading and trailing edge of the slider, respectively.

8. Regarding Claims 7 and 24, Kasajima et al shows (Figs. 1-6) a slider assembly, wherein the weight (21a) and second weight (21b) are positioned towards opposite edges of the slider, the opposite edges extending between trailing and leading edges of the slider.

9. Regarding Claims 8 and 25, Kasajima et al shows (Figs. 1-6) a slider assembly, wherein a pivot axis of the flexure member is about parallel to an air bearing surface of the slider.

10. Regarding Claims 9 and 26, Kasajima et al shows (Figs. 1-6) a slider assembly, wherein the weight has a flat profile, wherein a plane of the weight along the profile is oriented at an angle with respect to an air bearing surface of the slider.

11. Regarding Claim 10, Kasajima et al shows (Fig.11) a slider assembly, wherein the flexure member allows the weight to twist (arrow in Figure 11) about an axis of the flexure member.

12. Regarding Claims 11 and 27, Kasajima et al shows (Figs. 1-6) a slider assembly, wherein the weight is an integral part (composed as a unit) of the flexure member.

13. Regarding Claims 13 and 29, Kasajima et al shows (Figs. 1-6) a slider assembly, wherein the vibration absorber is damped (layers 26,28).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 12,14,28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasajima et al (USPN 6,751,062) in view of Giere et al (USPN 5,940,251).

16. Regarding Claims 12,14,28, and 30, Kasajima et al shows all the features described, *supra*, but does not show a slider assembly, wherein the vibration absorber is tuned to about match a natural frequency of vibration, and wherein the damped vibration absorber is tuned to a frequency lower than a natural frequency of vibration of the slider when the slider is in a flying state.

Giere et al shows (Col. 3, lines 7-11) a slider assembly, wherein the vibration absorber is tuned to about match a natural frequency of vibration, and wherein the damped vibration absorber is tuned to a frequency lower than a natural frequency of vibration of the slider when the slider is in a flying state.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to tune the vibration absorber of Kasajima et al as taught by Giere et al. The rationale is as follows: One of ordinary skill in the art at the time the invention was made would have

Art Unit: 2627

been motivated to tune the vibration absorber of Kasajima et al as taught by Giere et al in order to reduce vibration in the slider assembly.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Blouin whose telephone number is 571-272-7583. The examiner can normally be reached on M-F from 6:00 to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch, can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mark Blouin
Patent Examiner
Art Unit 2653
April 13, 2006



William J. Klimavicz
Primary Patent Examiner
Art Unit 2627